

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of Masaki YANAGIOKA

Application No.: 10/599,151

Filed: September 21, 2006

For: RUBBER COMPOSITION FOR TIRE TREAD AND PNEUMATIC TIRE
USING THE SAME

Group Art Unit: 1796

Examiner: John Uselding

Confirmation No.: 5036

DECLARATION UNDER 37 C.F.R. § 1.132

I, Masaki Yanagioka, declare that:

I am the inventor of the above-captioned patent application.

I received my Master of Engineering from the University of Tokyo in 2001, and I have been employed by Bridgestone Corporation since 2001, where I have been engaged mainly in research and development of fillers for a tire. Further, I received my Ph.D. of Chemical Engineering from Stanford University in 2009.

I have made the following experiments in order to measure a hydrogen desorption ratio and a toluene tinting permeability of the carbon black in Examples 4-7 of Sakakibara (US 6,197,870).

Experimental Procedure

The carbon blacks in Examples 4-7 of US 6,197,870 are presently prepared in the carbon black producing furnace under the operating conditions shown in the following table A. With respect to the resulting carbon blacks, the hydrogen desorption ratio and the toluene tinting permeability are measured according to the methods described in the specification of the present application. Results are also shown in the following table A.

Table A: Operating conditions and Results

	Presently prepared carbon black in Example 4 of US 6,197,870	Presently prepared carbon black in Example 5 of US 6,197,870	Presently prepared carbon black in Example 6 of US 6,197,870	Presently prepared carbon black in Example 7 of US 6,197,870
Amount of raw material oil at second stage (kg/hr)	228	147	115	122
Reaction time (mmsec.)	96	280	357	340
N ₂ SA (m ² /g)	131	162	194	252
IA (mg/g)	118	173	207	270
CTAB surface area (m ² /g)	121	146	170	200
N ₂ SA / IA	1.11	0.94	0.94	0.93
0.260 - 6.25×10 ⁻⁴ ×(CTAB) (%)	0.18	0.17	0.15	0.14
Hydrogen desorption ratio (%)	0.32	0.16	0.12	0.10
Toluene tinting permeability (%)	60	98	100	100

(Summary)

As seen from Table A, the carbon blacks in Examples 4-7 of US 6,197,870 do not satisfy either of (1) a hydrogen desorption ratio $> 0.260 - 6.25 \times 10^{-4} \times \text{CATB (wt\%)}$ or (2) a toluene tinting permeability of not less than 90%. Therefore, Sakakibara (US 6,197,870) fails to disclose the carbon black used in the present invention.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: November 2, 2009

Declarant: 
Masaki Yanagioka